09/599,958.

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=> file biosis medline caplus wpids uspatfull
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*** YOU HAVE NEW MAIL ***

=> s secoisolariciresinol?
L1          434 SECOISOLARICIRESINOL?

=> s l1 and diglucoside
L2           78 L1 AND DIGLUCOSIDE

=> s l2 and treatment
L3           18 L2 AND TREATMENT

=> s l3 and diabete?
L4            8 L3 AND DIABETE?

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5            6 DUP REM L4 (2 DUPLICATES REMOVED)

=> d l5 bib abs 1-6

L5   ANSWER 1 OF 6  USPATFULL
AN     2001:116462  USPATFULL
TI     Complex containing lignan, phenolic and aliphatic substances from flax
       and process for preparing
IN     Westcott, Neil D., Saskatoon, Canada
       Paton, David, Saskatoon, Canada
PA     Agriculture and Agri-Food Canada, Saskatoon, Canada (non-U.S.
       corporation)
PI     US 6264853          B1   20010724
AI     US 1999-334557           19990621 (9)
DT     Utility
FS     GRANTED
EXNAM  Primary Examiner: Warden, Jill; Assistant Examiner: Cole, Monique T.
CLMN   Number of Claims: 15
ECL    Exemplary Claim: 1
DRWN   14 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 455
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     A substanially pure chemically bound complex is derived from flax
       containing secoisolariciresinol diglucoside,
       cinnamic acid glycosides and hydroxy methyl glutaric acid. The complex
       is obtained by preparing an aqueous aliphatic alcoholic extract from
       flax and subjecting this aqueous extract to ultrafiltration whereby low
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molecular weight species remain with a filtrate and higher molecular weight species comprising the separated complex are retained.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 6 WPIDS (C) 2002 THOMSON DERWENT
AN 2001-137803 [14] WPIDS
DNC C2001-040434
TI Complex containing cinnamic acid glycosides, a lignan and hydroxy methyl glutaric acid, may be used to prevent breast cancer, **diabetes** or hypercholesterolemic atherosclerosis.
DC B04 D13
IN PATON, D; WESTCOTT, N D
PA (MIAC) CANADA DEPT AGRIC & AGRI-FOOD CANADA; (AGRI-N) AGRIC & AGRI-FOOD CANADA
CYC 95
PI WO 2000078771 A1 20001228 (200114)* EN 26p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000056664 A 20010109 (200122)
US 6264853 B1 20010724 (200146)
EP 1192167 A1 20020403 (200230) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT WO 2000078771 A1 WO 2000-CA737 20000620; AU 2000056664 A AU 2000-56664 20000620; US 6264853 B1 US 1999-334557 19990621; EP 1192167 A1 EP 2000-941821 20000620, WO 2000-CA737 20000620
FDT AU 2000056664 A Based on WO 200078771; EP 1192167 A1 Based on WO 200078771
PRAI US 1999-334557 19990621
AN 2001-137803 [14] WPIDS
AB WO 200078771 A UPAB: 20010312
NOVELTY - Novel pure complex, which is derived from flax seed and contains:

(i) cinnamic acid glycosides;
(ii) **secoisolariciresinol diglucoside** (SDG); and
(iii) hydroxy methyl glutaric acid (HMGA)

The complex has a molecular weight of at least 30,000.

DETAILED DESCRIPTION - Pure complex, which is derived from flax seed and contains cinnamic acid glycosides, SDG and HMGA, is new. The complex has a molecular weight of at least 30,000.

INDEPENDENT CLAIMS are included for:

(A) obtaining a pure complex derived from flax, where the complex contains cinnamic acid glycosides, SDG and HMGA, comprising:

(i) obtaining an aqueous aliphatic alcoholic extract of flax seed or flax seed meal; and

(ii) subjecting this aqueous extract to ultrafiltration, so that low molecular weight species remain with a filtrate and higher molecular weight species, comprising the complex, are retained; and

(B) obtaining a pure complex derived from flax, where the complex is as described above, comprising:

(i) obtaining an aqueous aliphatic alcoholic extract of flax seed or flax seed meal; and

(ii) subjecting this aqueous extract to fractionation on a column containing a solid support of size exclusion or gel permeation resins, so that higher molecular weight species are separated from low molecular weight species.

ACTIVITY - Cytostatic; antilipemic; antiatherosclerotic; antidiabetic; antioxidant.

MECHANISM OF ACTION - Tyrosine kinase inhibitor.

USE - The pure complex is useful as a nutraceutical and may be used

in tablet or capsule form. It can also be incorporated into formulated foodstuffs as a functional food. It can also be used in animal care or animal feeds. The complex is believed to impart the benefits of its component parts found in flax seed. The lignan SDG can inhibit development of mammary tumors or colon cancer, reduce development of hypercholesterolemic atherosclerosis in animal models, and may also have benefits in **treatment** of lupus nephritis and **diabetes** mellitus. It may also have antioxidant properties. The cinnamic acid glycosides are useful as antioxidants and tyrosine kinase inhibitors. HMGA has hypercholesterolemic properties.

ADVANTAGE - Due to the high oil content and polysaccharide mucilage content of whole or ground flaxseed, intake of large amounts of flaxseed could contribute to excessive calorie intake and increased laxation. Flaxseed also contains cyanide-containing compounds, which could result in organ damage over long periods of time. The new complex includes the valuable components of flax seed but not the undesirable components. Dwg.0/0

L5 ANSWER 3 OF 6 WPIDS (C) 2002 THOMSON DERWENT
AN 2001-203253 [21] WPIDS
DNC C2001-060464
TI **Secoisolariciresinol diglucoside** metabolite in pure form is used for **treatment** of disease or condition requiring administration of antioxidant.
DC B02 B03
IN PRASAD, K
PA (UYSA-N) UNIV SASKATCHEWAN TECHNOLOGIES INC
CYC 1
PI CA 2312164 A1 20001230 (200121)* EN 21p
ADT CA 2312164 A1 CA 2000-2312164 20000623
PRAI US 1999-141254P 19990630
AN 2001-203253 [21] WPIDS
AB CA 2312164 A UPAB: 20011129
NOVELTY - A **secoisolariciresinol diglucoside** (SDG) metabolite selected from **secoisolariciresinol** (SECO), enterodiol (ED) and enterolactone (EL) in pure form is used for **treatment** of disease or condition requiring administration of antioxidant.

ACTIVITY - Antiarteriosclerotic; antidiabetic; vasotropic; cardiant; antibacterial; immunosuppressive; gastrointestinal; antiulcer; antiparkinsonian; antirheumatic; antharthritic; cerebroprotective.

MECHANISM OF ACTION - Antioxidant.

USE - The SDG metabolites are useful for treating hypercholesterolemic atherosclerosis, **diabetes** types I or II, ischemic or heart disease, prevention of myocardial injury during open heart surgery, volume or pressure overload heart failure, prevention of restenosis following percutaneous transluminal coronary angioplasty, hemorrhagic or endotoxic shock, aging, inflammatory bowel disease (Crohn's disease, ulcerative colitis), Parkinson's disease, rheumatoid arthritis or stroke.

ADVANTAGE - Use of the metabolite reduces or prevents late complications associated with the above disease conditions and hence morbidity and mortality in these disease states are also reduced or prevented.

DESCRIPTION OF DRAWING(S) - Figure I is representative tracings showing changes in the chemiluminescence (CL) of Zymosan-stimulated polymorphonuclear leukocytes chemiluminescence (PMNL-CL) in the absence (1) and presence of 2.5 mg/ml of SDG (2), SECO (3), EL (4) or ED (5). Dwg.1/8

L5 ANSWER 4 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AN 2000:273313 BIOSIS
DN PREV200000273313
TI Protective effect of **secoisolariciresinol diglucoside** against streptozotocin-induced **diabetes** and its mechanism.

AU Prasad, Kailash (1); Mantha, Subrahmanyam V.; Muir, Alister D.; Westcott, Neil D.
CS (1) Department of Physiology, College of Medicine, University of Saskatchewan, 107 Wiggins Road, Saskatoon, SK, S7N 5E5 Canada
SO Molecular and Cellular Biochemistry, (March, 2000) Vol. 206, No. 1-2, pp. 141-150. print..
ISSN: 0300-8177.
DT Article
LA English
SL English
AB Objectives: Reactive oxygen species (ROS) have been implicated in the development of streptozotocin (STZ)-induced **diabetes** mellitus. **Secoisolariciresinol diglucoside** (SDG) isolated from flaxseed is an antioxidant. An investigation was made of the effects of SDG on the development of STZ-induced **diabetes** in rat, to determine if SDG can prevent/reduce the development of **diabetes** and if this prevention/reduction is associated with reduction in oxidative stress. Design and Methods: The rats were divided into 4 groups: Group I, Control; Group II, SDG (22 mg/kg body wt, orally) for 24 days; Group III, STZ (80 mg/kg intraperitoneally); Group IV, SDG in the dose similar to Group II three days prior to STZ and 21 days thereafter. Oxidative stress was assessed by measuring serum and pancreatic lipid peroxidation product malondialdehyde (MDA), pancreatic antioxidant reserve (pancreatic-CL) and oxygen free radical producing activity of white blood cells (WBC-CL). A diagnosis of **diabetes** was made on the basis of glucosuria and was confirmed at the time of sacrifice (21 days after STZ **treatment**) by the presence of hyperglycemia. At the end of the protocol blood samples were collected for estimation of glucose, MDA and WBC-CL, and pancreas were removed for estimation of MDA and antioxidant reserve. Results: Incidence of **diabetes** was 100% in Group III and 25% in Group IV. SDG prevented the development of **diabetes** by 75%. Development of **diabetes** was associated with an increase in serum and pancreatic MDA, and in WBC-CL, and a decrease in pancreatic antioxidant reserve. Prevention of **diabetes** by SDG was associated with a decrease in serum and pancreatic MDA and WBC-CL and an increase in pancreatic antioxidant reserve. Conclusions: These results suggest that STZ-induced **diabetes** is mediated through oxidative stress and that SDG is effective in reducing the STZ-induced **diabetes** mellitus.

L5 ANSWER 5 OF 6 USPATFULL
AN 1998:154252 USPATFULL
TI Purified SDG as an antioxidant
IN Prasad, Kailash, Saskatoon, Canada
PA The University of Saskatchewan, Saskatoon, Canada (non-U.S. corporation)
PI US 5846944 19981208
AI US 1997-826500 19970403 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Robinson, Douglas; Assistant Examiner: Crane, I. Eric
CLMN Number of Claims: 12
ECL Exemplary Claim: 1,5,7
DRWN 5 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 706
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The compound secoisolariciresinal **diglucoside** (SDG), obtained from flaxseed is used for reducing or preventing the development of hypercholesterolemic atherosclerosis and for reducing total cholesterol in humans or animals. It is also used for treating **diabetes** mellitus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 6 WPIDS (C) 2002 THOMSON DERWENT

AN 1998-217939 [20] WPIDS
DNC C1998-069104
TI **Treatment** of atherosclerosis or **diabetes** - by administering seco iso lariciresinol di glucoside.
DC B03
IN PRASAD, K
PA (UYSA-N) UNIV SASKATCHEWAN
CYC 2
PI CA 2201652 A 19971004 (199820)* 27p
US 5846944 A 19981208 (199905)#
ADT CA 2201652 A CA 1997-2201652 19970403; US 5846944 A US 1997-826500 19970403
PRAI US 1996-14818P 19960404; US 1997-826500 19970403
AN 1998-217939 [20] WPIDS
AB CA 2201652 A UPAB: 19980520
Reducing or preventing the development of hypercholesterolaemic atherosclerosis or reducing total cholesterol comprises administering **secoisolariciresinol diglucoside** (SDG).

Also claimed is a method for treating **diabetes** mellitus, comprising administering SDG in substantially pure form.

The SDG is obtained from flaxseed, in the form of a crude extract, and has a purity of at least 95%. The dose is 5-20 mg/kg.

ADVANTAGE - The drawbacks of flaxseed meal, namely laxative effects, the presence of cyanogenic glycosides and high calorie content, are avoided.

Dwg.0/5

=> s l5 and enterodiol
L6 2 L5 AND ENTERODIOL

=> d l6 bib abs 1-2

L6 ANSWER 1 OF 2 WPIDS (C) 2002 THOMSON DERWENT
AN 2001-203253 [21] WPIDS
DNC C2001-060464
TI **Secoisolariciresinol diglucoside** metabolite in pure form is used for **treatment** of disease or condition requiring administration of antioxidant.
DC B02 B03
IN PRASAD, K
PA (UYSA-N) UNIV SASKATCHEWAN TECHNOLOGIES INC
CYC 1
PI CA 2312164 A1 20001230 (200121)* EN 21p
ADT CA 2312164 A1 CA 2000-2312164 20000623
PRAI US 1999-141254P 19990630
AN 2001-203253 [21] WPIDS
AB CA 2312164 A UPAB: 20011129
NOVELTY - A **secoisolariciresinol diglucoside** (SDG) metabolite selected from **secoisolariciresinol** (SECO), **enterodiol** (ED) and enterolactone (EL) in pure form is used for **treatment** of disease or condition requiring administration of antioxidant.

ACTIVITY - Antiarteriosclerotic; antidiabetic; vasotropic; cardiant; antibacterial; immunosuppressive; gastrointestinal; antiulcer; antiparkinsonian; antirheumatic; antharthritic; cerebroprotective.

MECHANISM OF ACTION - Antioxidant.

USE - The SDG metabolites are useful for treating hypercholesterolemic atherosclerosis, **diabetes** types I or II, ischemic or heart disease, prevention of myocardial injury during open heart surgery, volume or pressure overload heart failure, prevention of restenosis following percutaneous transluminal coronary angioplasty, hemorrhagic or endotoxic shock, aging, inflammatory bowel disease (Crohn's disease, ulcerative colitis), Parkinson's disease, rheumatoid arthritis or

stroke.

ADVANTAGE - Use of the metabolite reduces or prevents late complications associated with the above disease conditions and hence morbidity and mortality in these disease states are also reduced or prevented.

DESCRIPTION OF DRAWING(S) - Figure I is representative tracings showing changes in the chemiluminescence (CL) of Zymosan-stimulated polymorphonuclear leukocytes chemiluminescence (PMNL-CL) in the absence (1) and presence of 2.5 mg/ml of SDG (2), SECO (3), EL (4) or ED (5). Dwg.1/8

L6 ANSWER 2 OF 2 USPATFULL
AN 2001:116462 USPATFULL
TI Complex containing lignan, phenolic and aliphatic substances from flax and process for preparing
IN Westcott, Neil D., Saskatoon, Canada
Paton, David, Saskatoon, Canada
PA Agriculture and Agri-Food Canada, Saskatoon, Canada (non-U.S. corporation)
PI US 6264853 B1 20010724
AI US 1999-334557 19990621 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Warden, Jill; Assistant Examiner: Cole, Monique T.
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 455
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A substanially pure chemically bound complex is derived from flax containing **secoisolariciresinol diglucoside**, cinnamic acid glycosides and hydroxy methyl glutaric acid. The complex is obtained by preparing an aqueous aliphatic alcoholic extract from flax and subjecting this aqueous extract to ultrafiltration whereby low molecular weight species remain with a filtrate and higher molecular weight species comprising the separated complex are retained.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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FILE 'BIOSIS, MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 06:36:16 ON 25 JUN 2002
L1 434 S SECOISOLARICIRESINOL?
L2 78 S L1 AND DIGLUCOSIDE
L3 18 S L2 AND TREATMENT
L4 8 S L3 AND DIABETE?
L5 6 DUP REM L4 (2 DUPLICATES REMOVED)
L6 2 S L5 AND ENTERODIOL

=> s l5 and enterolactone
L7 2 L5 AND ENTEROLACTONE

=> s l7 not l6
L8 0 L7 NOT L6

=>